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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/526,400 | 03/02/2005 | Sami Poykko | 59643.00578 | 3257 |
| 32294 | 7590 | 10/31/2007 | EXAMINER | |
| SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182 | | | HUYNH, NAM TRUNG | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2617 | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|------------------------------|------------------------|---------------------|--|
| | 10/526,400 | POYKKO ET AL. | |
| Examiner | Art Unit | | |
| Nam Huynh | 2617 | | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 August 2007.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2 and 4-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 18-23 is/are allowed.

6) Claim(s) 1,2,4-17 and 24-27 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. ____.
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
5) Notice of Informal Patent Application
6) Other: ____.

DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed on 8/15/2007. No amendments were made to the previously presented claims 1, 2, and 4-27.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 2, 4-17, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havinis et al. (US 6,295,454) (hereinafter Havinis) in view of Donis et al. (US 6,014,564) (hereinafter Donis).

Regarding claims 1, 9, 26, and 27, Havinis et al. discloses a system and method for providing location information for terminal-based position calculation comprising a Serving Mobile Location Center (SMLC) that can allow a mobile station (MS) to obtain (collect) positioning measurements (location information) (column 4, lines 63-64). The

SMLC also chooses an optimum positioning method available that can be network or terminal based (column 4, lines 14-20) via a command message (column 5, lines 16-28). Once the MS obtains the command message, the MS calculates its own location based upon its own positioning measurements, the additional information supplied by the network, and a location function within the MS (column 5, lines 36-40). However, Havinis et al. does not explicitly disclose the determination of a base station estimate. Donis discloses a dynamic virtual cell area (virtual base station) to be configured around a mobile subscriber as a mobile subscriber moves within the network. The network is designed to anticipate a user's mobility pattern and set up a new virtual cell area in advance of the mobile subscriber moving into that new area based on characteristics such as home location, work location and long term travel history (determining a virtual base station estimate based on collected location information) (column 1, lines 45-59 and column 5, lines 18-32). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the SMLC of Havinis to include the configuration of a virtual base station estimate, as taught by Donis, in order to predict the mobile subscriber's future location ahead of time, thus enabling the network to accomplish much of the overhead processing and setup used to accommodate the mobile subscriber before arrival in the new area, thus ensuring a smooth handoff and transition period during a call.

Regarding claim 2, Havinis discloses an example of a message received by the MS containing current cell ID and a Timing Advance (TA) value for a serving base station in order for the MS to calculate its positioning (column 7, lines 24-26).

Regarding claim 4, the limitations are rejected as applied to claims 1 and 2.

Regarding claims 5-7, Donis teaches that the virtual cell area is set up based on user criteria is indicative of predefined travel patterns such as where a person routinely travels (virtual measurement) and may take into consideration speed, time of day, etc. (real measurement) (column 5, lines 1-32).

Regarding claim 8, Havinis discloses that positioning information within a message shall indicate to the Mobile Switching Center/Visitor Location Register (MSC/VLR) whether the MS can support terminal-based positioning, the type of terminal-based positioning methods supported, and whether the MS is capable of performing location calculations based upon the positioning measurements. Once the MSC/VLR receives this data it is sent to the SMLC so that it can determine the optimum positioning method (column 4, liens 50-59).

Regarding claim 10, Havinis discloses that the MS is commanded to begin the collection of location information (column 5, lines 21-22).

Regarding claim 11, Havinis discloses a Position Measurement Module (PMM) within the MS to perform positioning measurements (column 5, lines 41-44) therefore rendering the arrangement of the mobile device to measure a level of at least one type of information.

Regarding claim 12, Havinis discloses that a Base Station Controller (BSC) provides the current cell ID and Timing Advance (TA) value (at least one of timing advance information) for a serving Base Transceiver Station (BTS) and sends this to

MSC. The MSC then sends this data to the SMLC, which is then sent to the MS in order to calculate its position (column 7, lines 21-35).

Regarding claim 13, Donis teaches that the mobile subscriber continuously measures the signal power (received signal level) received from the current base station and adjacent base station (column 3, lines 56-67).

Regarding claim 14, Havinis shows in figure 5 a MS that is represented by a cellular phone (item 20).

Regarding claims 15 and 17, Havinis discloses that a Base Station Controller (BSC) provides the current cell ID and Timing Advance (TA) value for a serving Base Transceiver Station (BTS) and sends this to MSC. The MSC then sends this data to the SMLC, which is then sent to the MS in order to calculate its position (column 7, lines 21-35). The current cell is selected in order to measure information that is sent to the MS for the calculation of its position, therefore rendering the limitations of claim 17.

Regarding claim 16, Havinis teaches that one of the positioning methods is E-OTD, which takes into account nearby base stations (neighboring cells) (column 9, lines 14-24).

Regarding claims 24-25, Havinis discloses an iterative method in figure 8 by showing the loop-connecting step 870 and 685. A linear method is shown by the flow downward flow of the steps.

Allowable Subject Matter

4. Claims 18-23 are allowed.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 2, 4-17, and 24-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NTH
10/24/07



GEORGE ENG
SUPERVISORY PATENT EXAMINER